

REMARKS

Entry of the foregoing and reconsideration of the application identified in caption as amended, pursuant to and consistent with the Rules of Practice in Patent Cases, and in light of the remarks which follow, is respectfully requested.

By the present amendment, claims 1 and 5 have been amended, so that claims 1-17 and 21-23 will remain pending. Support for the amendments to claim 1 can be found at least at pages 8 to 14 of the application as filed where numerous specific examples are disclosed wherein R^2 is an alkyl residue having 2 or more carbon atoms.

Claim 5 has been indicated as allowable if rewritten in independent form to include all of the limitations of the base claim and any intervening claims. Accordingly, Claim 5 has been amended to include the subject matter of claim 1 from which it depends and is in condition for allowance.

Claims 1-4 stand rejected under 35 U.S.C. 102(b) as anticipated by Mueller et al. This rejection is respectfully traversed.

Mueller et al. disclose only one compound which was covered by Formula (I) of former claim 1. As can be seen from presently amended claim 1, this compound, wherein R^2 is an alkyl residue having 1 carbon atom, has been excluded from the text of the claim. Therefore, in view of the present amendments, the subject matter of claims 1-4 is not anticipated by the disclosure of Mueller et al.

Moreover, the subject matter of claims 1-4 is not obvious in view of the teachings of Mueller et al. It is an object of the present invention to provide polymerizable compositions having low polymerization shrinkage and a radical polymerization capability comparable to methacrylates (see page 2, line 37 through page 3, line 2 of the present application). This object is achieved by the bicyclic cyclopropane derivatives according to Formula (I). It was demonstrated by the present inventors that these compounds have a higher reactivity (see Example 5) and lower polymerization shrinkage (see Example 6) than that of known compounds. In addition, the inventors demonstrated that the mechanical properties of materials obtained by hardening compositions including a compound according to Formula (I) are in every respect comparable to the mechanical properties of materials based on a conventional methacrylate mixture (see Example 7).

It was known before the priority date of the present invention that materials which are based on cyclopropanes show less shrinkage upon polymerization than linear vinyl

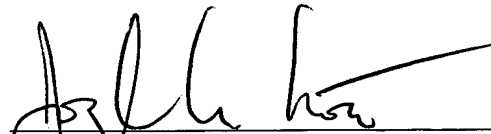
monomers such as methacrylates (see page 1, paragraph 2 of the present application). However, vinyl cyclopropanes show a lower radical polymerization activity than linear compounds. As a consequence of this, it is difficult to polymerize mixtures of linear and cyclic monomers. Upon polymerization the linear monomers react first due to their higher reactivity and only after the linear compounds have been consumed do the cyclic compounds react. Co-polymerization of linear and cyclic compounds thus results in heterogeneously composed products with unsatisfactory mechanical properties (see page 2, lines 1 to 11 of the present application).

The inventors surprisingly found that the polymerization activity of vinylcyclopropanes can be improved by fusing the cyclopropane ring with another ring system. This solution was not obvious from the disclosure of Mueller et al. Mueller et al. are directed to trans-fused α -methylen γ -lactones because of their biological and pharmacological activity (page 4741, left column, paragraph 2). Mueller et al. do not describe the polymerization of these compounds and it would therefore not be obvious from this document to use the claimed compounds in order to solve the technical problem of the present invention. A skilled person interested in solving the technical problem of the invention would not have considered the publication by Mueller et al. to be of any relevance.

For at least the reasons noted above, Applicant's submit that claims 1-4 are not obvious in view of the disclosure of Mueller et al. Withdrawal of the record rejection and allowance of claims 1-4 is respectfully requested.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is hereby earnestly solicited.

Respectfully submitted,



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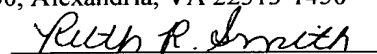
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